

embodiments, a mechanism may be used that pulls the push plate **410** back into the autoinsertor **420** and therefore, in these embodiments, the autoinsertor **420** serves as a container for the introduction needle **416**. In various embodiments, the adhesive strip **418** may be any size and shape, including, but not limited to, the size and shape shown in FIGS. 6A-6G.

[0054] The disposable housing assembly **402** infusion device mating assembly **404** may be mated with the bottom portion **412** of the infusion device **406** by placing the infusion device mating assembly **404** on top of the bottom portion **412** and then applying force in the direction towards the bottom portion **412**. As can be seen for example in FIG. 6E, in various embodiments, the infusion device mating assembly **404** is shaped such that it may be placed over the bottom portion **412** in any orientation. This may be beneficial/desirable for many reasons, including, but not limited to, the ability of a user/caregiver to vary the orientation of the disposable housing assembly **402** with respect to the bottom portion **412** of the infusion device. In various embodiments, the infusion device mating assembly **404** may be attached to the bottom portion **412** in any orientation, thus, the user may place the disposable housing assembly **402** in any orientation within 360 degrees relative to the bottom portion **412**.

[0055] In various embodiments, the infusion device mating assembly **404** may include a feature configured to interact with a feature on the bottom portion **412** that secures the infusion device mating assembly **404** to the bottom portion **412**. In various embodiments, these features may include locking features including but not limited to, tongue and groove features. In various embodiments, attaching the bottom portion **412** to the infusion device mating assembly **404** forms a fluid connection between a reservoir **518** in a disposable housing assembly **402** and the cannula **414**.

[0056] In various embodiments of this embodiment of the infusion device system, if and when a user wishes to move the location of the disposable housing assembly **402**, the infusion device mating assembly **404** may be removed from the bottom portion **412** and the bottom portion **412** and cannula **414** may be removed from the user. Following, the user may connect another infusion device **406** bottom portion **412** to their skin in a different location on their body and reconnect the disposable housing assembly **402**. In some embodiments, and referring also to FIG. 10, rather than removing the bottom portion **412** and the cannula **414**, the infusion device system may include a predetermined length of tubing **428** or other that connects to the bottom portion **412** on a first end of the tubing and to the infusion device mating assembly **404** on the second end of the tubing, thereby creating a fluid connection between the disposable housing assembly **402** and the cannula **414** without the need for removing a first cannula and inserting a second cannula.

[0057] In various embodiments of the bottom portion, the bottom portion may be made from clear plastic or another clear material allowing for the cannula site to be viewed. This may be desirable/beneficial for many reasons, including, but not limited to, the ability to determine whether the cannula has become dislodged or if there is blood or other indication of a potential occlusion within the cannula. In various embodiments, tubing may be used in conjunction with any embodiment of the infusion device described herein. Also, the tubing, in various embodiments, may be any size and length.

[0058] In various embodiments of the infusion device system, the disposable housing assembly **402** may include a viewing opening (see for example, FIG. 4, item **208**) allowing the user or a caregiver to view the cannula **414**. This may be desirable/beneficial for many reasons, including, but not limited to, the ability to view the status of the cannula **414** that is inserted in the user. This may be desirable/beneficial for many reasons, including, but not limited to, the ability to determine whether the cannula **414** has become dislodged or if there is blood or other indication of a potential occlusion within the cannula.

[0059] In various embodiments, the disposable housing assembly may include a fluid connector assembly, for example, one or more of the embodiments described U.S. patent application Ser. No. 13/788,260, filed Mar. 7, 2013 and entitled Infusion Pump Assembly, now U.S. Publication No. US-2014-0107579, published Apr. 17, 2014 (Attorney Docket No. K40) which is hereby incorporated herein by reference in its entirety. Thus, in these embodiments, the infusion device mating assembly may be part of the fluid connector assembly. In various embodiments including a fluid connector assembly and a viewing opening, the viewing opening may be included on the fluid connector assembly.

[0060] In any of the embodiments of the infusion device described herein the infusion device may connect to a length of tubing which is connected to a fluid source. However, in any of the embodiments of the infusion device described herein, the tubing may be optional and therefore, the infusion device is a tubless infusion device until and unless a user attaches a predetermined length of tubing to the infusion device.

[0061] In various embodiments, these methods may be used with respect to any device and/or medical device and/or any controller and/or remote controller for any device and/or medical device and/or any device used in conjunction with or in association with any device and/or medical device.

[0062] A number of embodiments have been described. Nevertheless, it will be understood that various modifications may be made. Accordingly, other embodiments are within the scope of the following claims.

[0063] While the principles of the invention have been described herein, it is to be understood by those skilled in the art that this description is made only by way of example and not as a limitation as to the scope of the invention. Other embodiments are contemplated within the scope of the present invention in addition to the exemplary embodiments shown and described herein. Modifications and substitutions by one of ordinary skill in the art are considered to be within the scope of the present invention.

What is claimed is:

1. An infusion device system comprising:

a disposable housing assembly comprising:

an infusion device mating assembly attached to the disposable housing assembly comprising a piercing needle; and

a reservoir,

wherein the piercing needle fluidly connected to the reservoir; and

an infusion device comprising:

a top portion comprising an introduction needle; and

a bottom portion comprising a septum and a cannula, the top portion removably attached to the bottom portion,